



Hand Safety Week – Preventing RSI's

**Richmond Refinery Safety Topic of the Day
Wednesday**

9/23/09

***Attention: Please turn on speakers for audio
attachment on the last slide!***



The size of the problem

Hand injuries are the single largest category of injuries at Chevron

Why?

- Hand RSIs averaged 8% of all hand recordable injuries in the last 5 years.

What is a Repetitive Stress Injury?

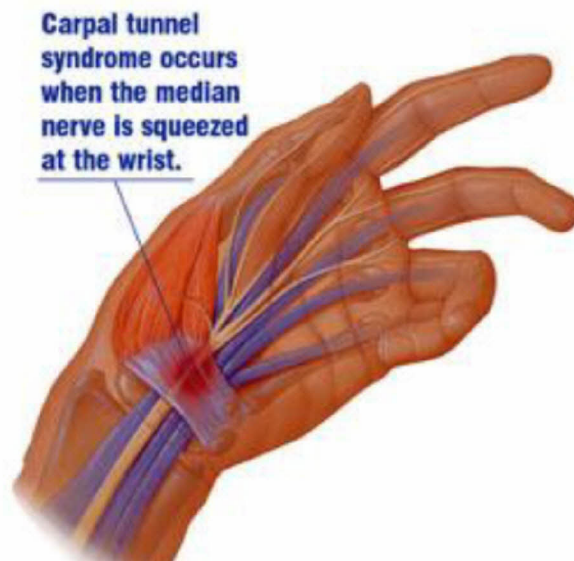
Repetitive stress injuries (RSI) are a group of conditions generally caused by placing too much stress on a joint. Most repetitive stress injuries are associated with repetitive motions at the computer or overuse injuries in sports.

An RSI occurs when stress is placed on a joint, pulling on the tendons and muscles around the joint. When the stress occurs repeatedly, the body does not have time to recover and becomes irritated. The body reacts to the irritation by increasing the amount of fluid in that area to reduce the stress placed on the tendon or muscle.

RSI's are also called Cumulative Trauma Disorders.

Examples of RSI's

- Back Strains/ Sprains
- Carpal Tunnel Syndrome
- Cubital Tunnel Syndrome
- Tendinitis
- Shoulder Strains



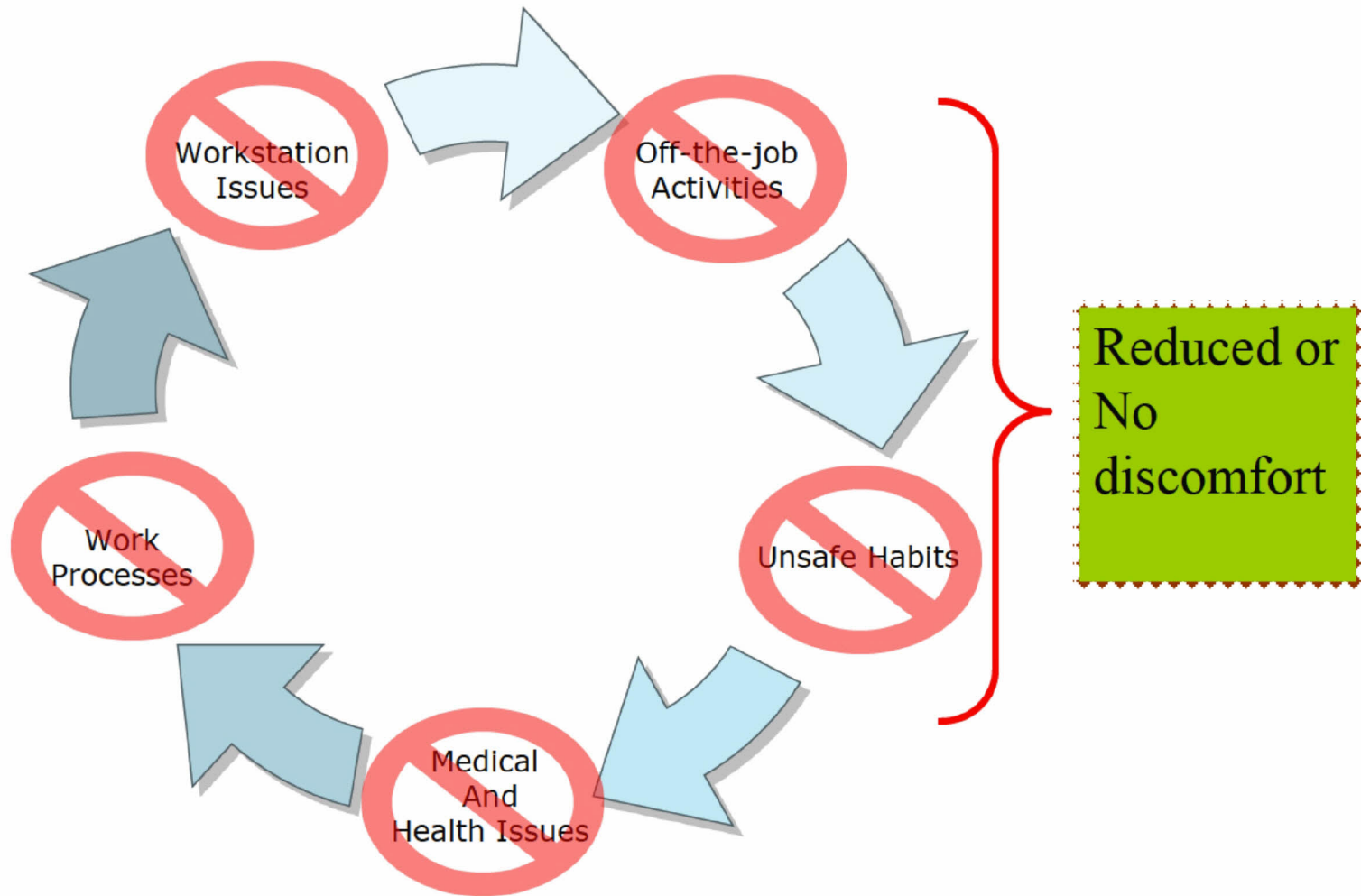


What are symptoms of an RSI?

- Pain or Discomfort
- Weakness or loss of grip strength
- Numbness and tingling in the hand
- Nocturnal Numbness
- Swelling and Soreness in wrists
- Inability to distinguish hot and cold

***Call 242-ERGO to report symptoms and/or discomfort
as soon as possible!***

Break the RSI Cycle – reduce risks in all areas.



Reducing the RSI risk with safe behaviors



Safe behaviors

Most significant risk factor

Impact both on and off-the-job activities

Most cost effective

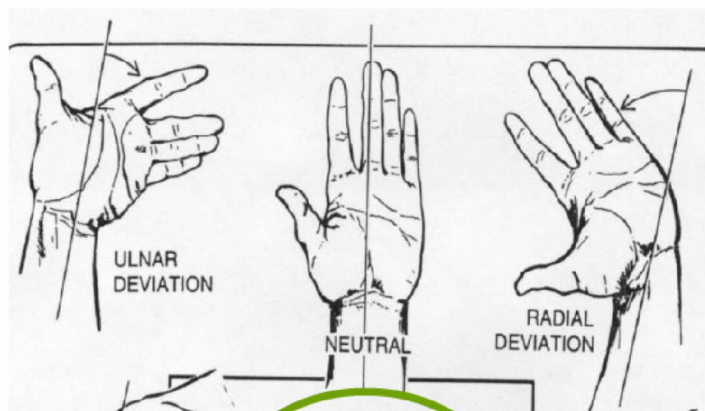
1. Adhere to Work Pace Software on Gil Workstations – 100% micro-pauses! 90% Work Pace Breaks!
2. Do your best to have good posture – Ears over Shoulders over Hips over Ankles

Assess, Analyze, Act

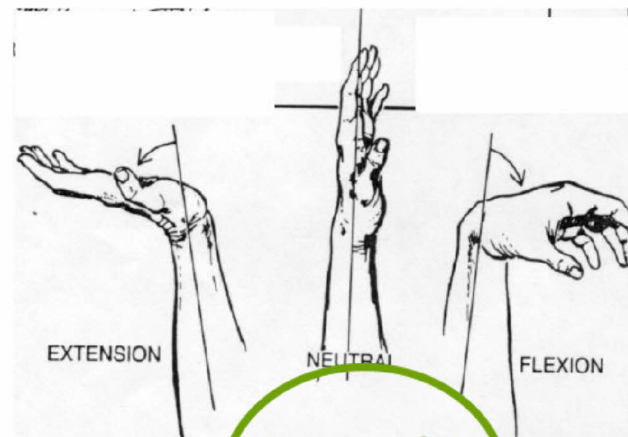


Hand tool - Risk Factors

1. Wrist and Hand Position



Neutral is
Desirable



Neutral is
Desirable

Some tools are specially designed so the tool does the bending and not your wrist. Bent handle pliers, hammers, utility knives and even screw drivers are commercially available. Depending on the task, these can mean less wear and tear on your joints and muscles.

Hand tool - Risk Factors

2. Repetitiveness of the task

- Similar Task/Movements
- Dependent on duration and recovery time
- A guideline for “repetition” is performing the same motions continuously for 2 hours, or more than a total of 4 hours during the day.

3. Pinch Grips

- Lateral, Precision, or Palmar Pinch

Pinch grips, when combined with high force and repetition can place stress on the wrist. One example is the lateral pinch which uses the thumb & side of the index finger like in turning a key. The precision pinch uses just the tip of the thumb & index finger for small tool use and the palmar pinch is when an object is held between the fingers and the palm.

Hand tool - Risk Factors

4. Poor Handle Design

- Slippery
- Unbalanced
- Hard, unpadded
- Grips that don't fit
- Finger indentations



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Reduce Risk Factors – Hand Tools

1. Good Handle Design

- Textured Grips
- Padded Handles
- Vibration Dampening
- Low force
- Elbow bent close to your side
- Accommodates different hand sizes, not too large

Reduce Risk Factors – Hand Tools

2. Properties of good PLIERS

- 4" handles
- Cushioned handles with friction
- Handle opening 2-2.5"
- Spring loaded
- Bent handles/ pistol grip



When selecting pliers, look for handles four or more inches long without pressure points on palms & fingers, cushioned handles with good friction for gripping and handle openings between 2-2 1/2 inches. Spring loaded handles in some pliers can lessen muscle fatigue and a bent handle design, depending on the job, may reduce wrist strain.

Reduce Risk Factors – Hand Tools

3. Properties of good SCREWDRIVERS

- 4 – 5" handle (standard)
- 3 – 4" handle (precision)
- Domed Handle
- Dual textured
- Blade tip matches the fastener

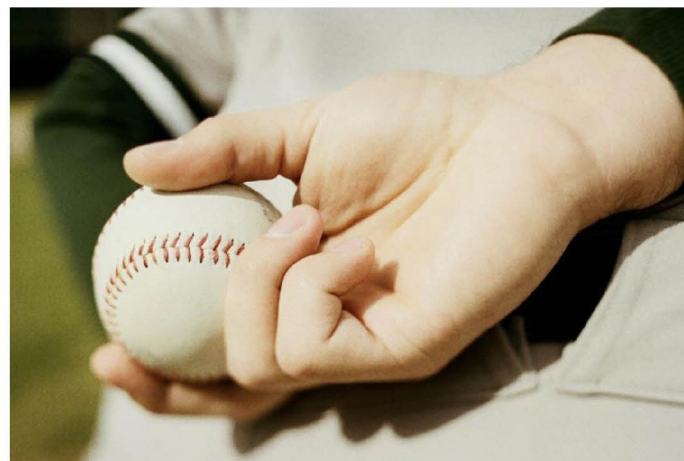
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Reduce RSI Risk Factors - Related

4. Maintain your fitness

- People who exercise 3+ times per week had fewer reports of discomfort (
- Take mini breaks and stretch breaks to improve range of motion and increase blood flow.

Like cars, preventive maintenance keeps our bodies running at peak efficiency. For people, protecting ourselves from CTD's means maintaining joint & muscle flexibility and strength through a regular routine of stretching and strength training.



Reduce RSI Risk Factors:

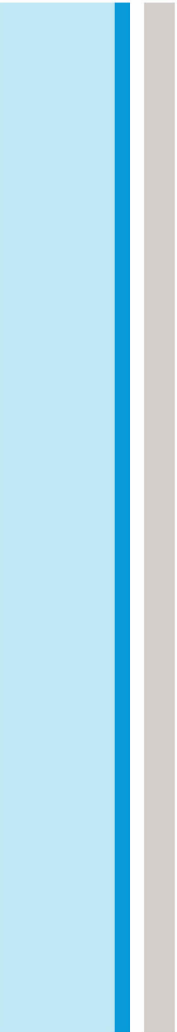
5. Vary your tasks – Work planning and flow

Varying your tasks provides recovery time for muscles of your back, shoulders, forearms, wrists and hands.



Message from Nigel Hearne,

Refinery General Manager



Hand Safety Week Activity

During a regularly scheduled safety meeting pass out IIF “Watch Your Hands”, neon finger-tipped gloves.


Ask members of your team to share their experiences related to Hand Safety, and what their key hand safety learning is.

Ask the group, “We want everyone to go home to same way they reported to work. Hand safety is one area of awareness we must maintain at all times. However - these gloves won’t protect us from every hazard in the field or office. What they can do is serve to remind us to constantly be assessing our work environment for hazards and risks”.

Whenever we see a pair of these gloves, let that be a reminder to us to do a complete LPSA and share what we learned.

LOSS PREVENTION SELF ASSESSMENT

BEFORE BEGINNING ANY ACTIVITY/TASK/JOB, AFTER A LOSS OR NEAR LOSS, ANY UNUSUAL CIRCUMSTANCES:



ASSESS the risk!
What could go wrong?
What is the worst thing that could happen if something does go wrong?

ANALYZE how to reduce the risk!
Do I have all the necessary Training and Knowledge to do this job properly?
Do I have all the proper Tools and Personal Protective Equipment?

ACT to ensure loss-free operations!
Take necessary Action to ensure the job is done properly!
Follow written procedures! Ask for assistance if needed!

DO NOT PROCEED UNLESS ALL RISKS HAVE BEEN ADDRESSED!
For Everyone • Every Day • All the Time

**WILL THE RIGHT
GLOVES
LESSEN OR
PREVENT
AN INJURY?**



Sharing Personal Stories

At the time of his injury, [REDACTED]
[REDACTED] was loading a pump –
listen to Bill's story.

***Safety Reminder – Be aware of
the presence of pinch points.
Do not try to use your body
(hand, arm, leg or feet) to slow
the movement of a mechanical
part.***



Sharing Personal Stories

[REDACTED] was injured seriously at home when he packed down garbage in a trash can.

Safety Reminder: Do and LPSA at the start of a new task. Assess all of the potential risks, analyze, and act to reduce risks and prevent injury and incidents. And, use the right tool for the job.



Sharing Personal Stories

At the time of his injury, [REDACTED] [REDACTED] was an operator at Blending and Shipping.

Safety Reminder - Pay attention to the little things. Follow up on safety work orders, when you're retrieving a sample, use a sample carrier, and finally, wear gloves – all of these things could have lessened the severity of my injury.



Sharing Personal Stories

████ pinched his finger while unloading a spool. Listen to █████ story.

Safety Reminder: Use the right tool for the job.